Incident report of San Francisco in summer 2014

For the course of Data Science at Scale on Coursera.org

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Introduction

This report is of finding and interpreting some patterns and relationships concealed in the data of Incident occurred in San Francisco in summer 2014.
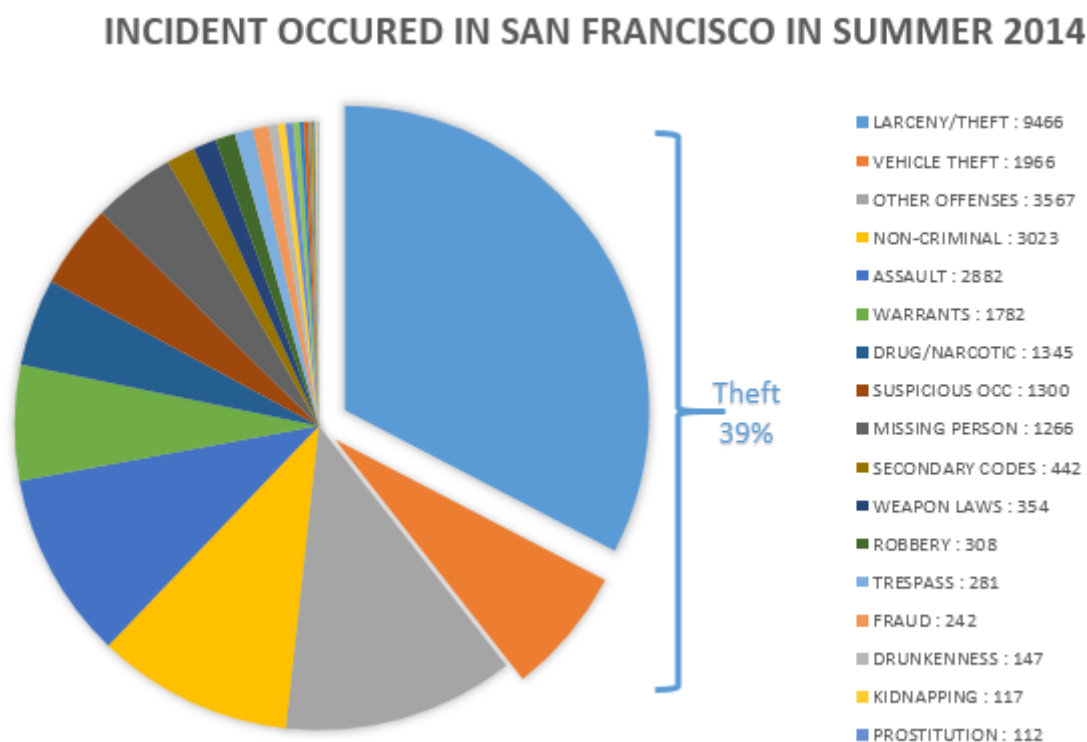
Methods

- The data of Incident occurred in San Francisco in summer 2014 download from https://github.com/uwescience/datasci_course_materials/tree/master/assignment6
- MySQL download form http://www.mysql.com/downloads
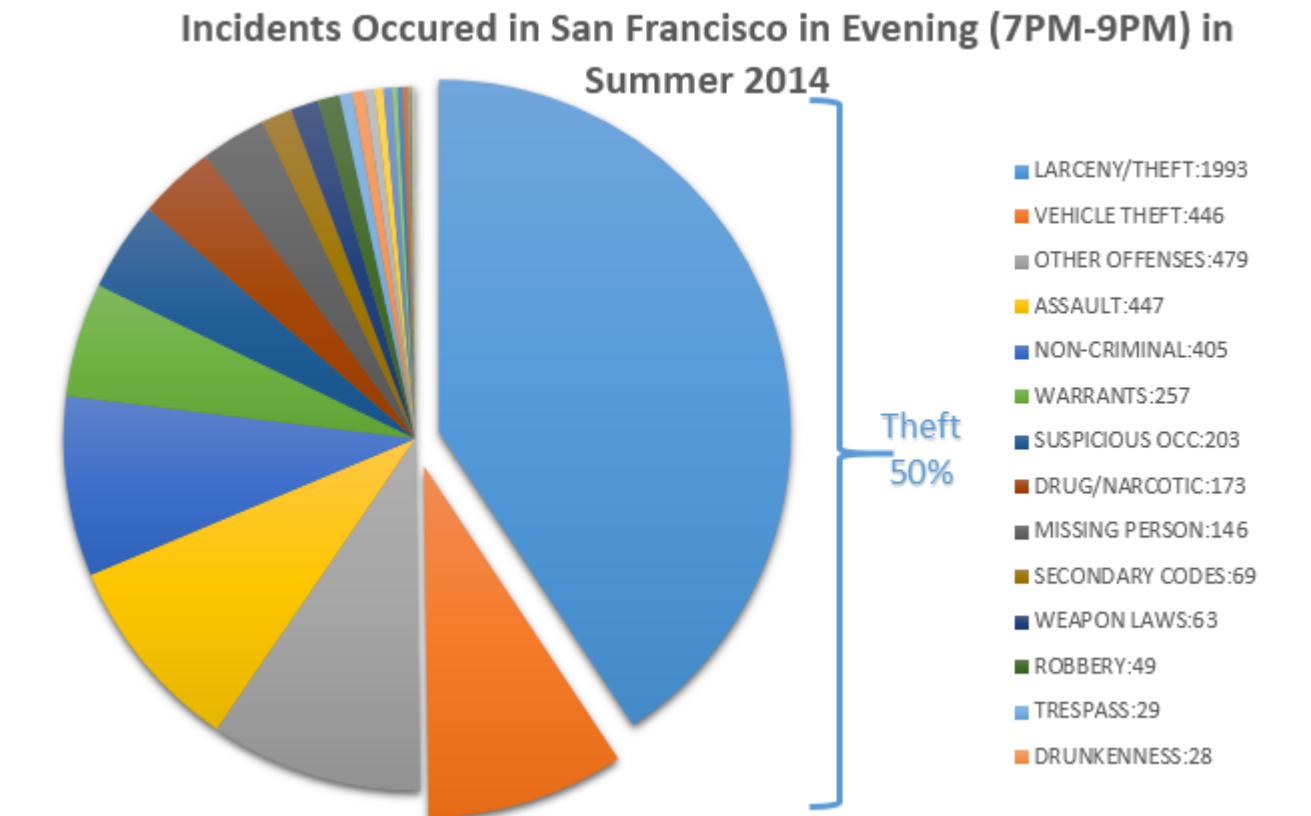- Excel and Word from Microsoft Office 2013

Findings

## 1. Theft took significant parts of incident. Furthermore, they raised in evening

1.1. Theft (including larceny and vehicle) took 39% of all incident

INCIDENT OCCURED IN SAN FRANCISCO IN SUMMER 2014

Theft 39%

- LARCENY/THEFT : 9466
- VEHICLE THEFT : 1966
- OTHER OFFENSES : 3567
- NON-CRIMINAL : 3023
- ASSAULT : 2882
- WARRANTS : 1782
- DRUG/NARCOTIC : 1345
- SUSPICIOUS OCC : 1300
- MISSING PERSON : 1266
- SECONDARY CODES : 442
- WEAPON LAWS : 354
- ROBBERY : 308
- TRESPASS : 281
- FRAUD : 242
- DRUNKENNESS : 147
- KIDNAPPING : 117
- PROSTITUTION : 112

1.2. Theft (including larceny and vehicle) took a half of incident in evening.

Incidents Occured in San Francisco in Evening (7PM-9PM) in Summer 2014

- LARCENY/THEFT:1993
- VEHICLE THEFT:446
- OTHER OFFENSES:479
- ASSAULT:447
- NON-CRIMINAL:405
- WARRANTS:257
- SUSPICIOUS OCC:203
- DRUG/NARCOTIC:173
- MISSING PERSON:146
- SECONDARY CODES:69
- WEAPON LAWS:63
- ROBBERY:49
- TRESPASS:29
- DRUNKENNESS:28

Theft 50%

1.3. The rate of theft raised at evening and reached 50% of all incident

Incident and Theft in San Francisco in Summer 2014

(Legend: All Incident, Theft, Rate of Theft on All Incident)
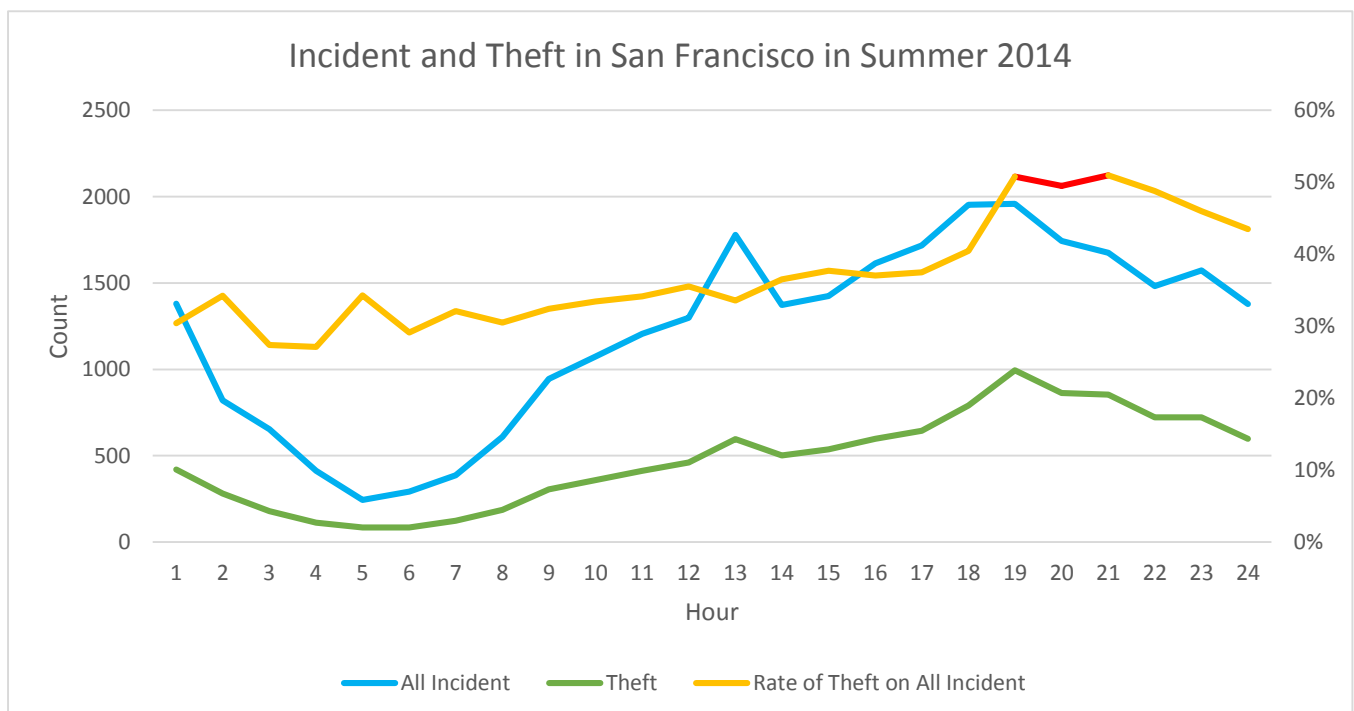
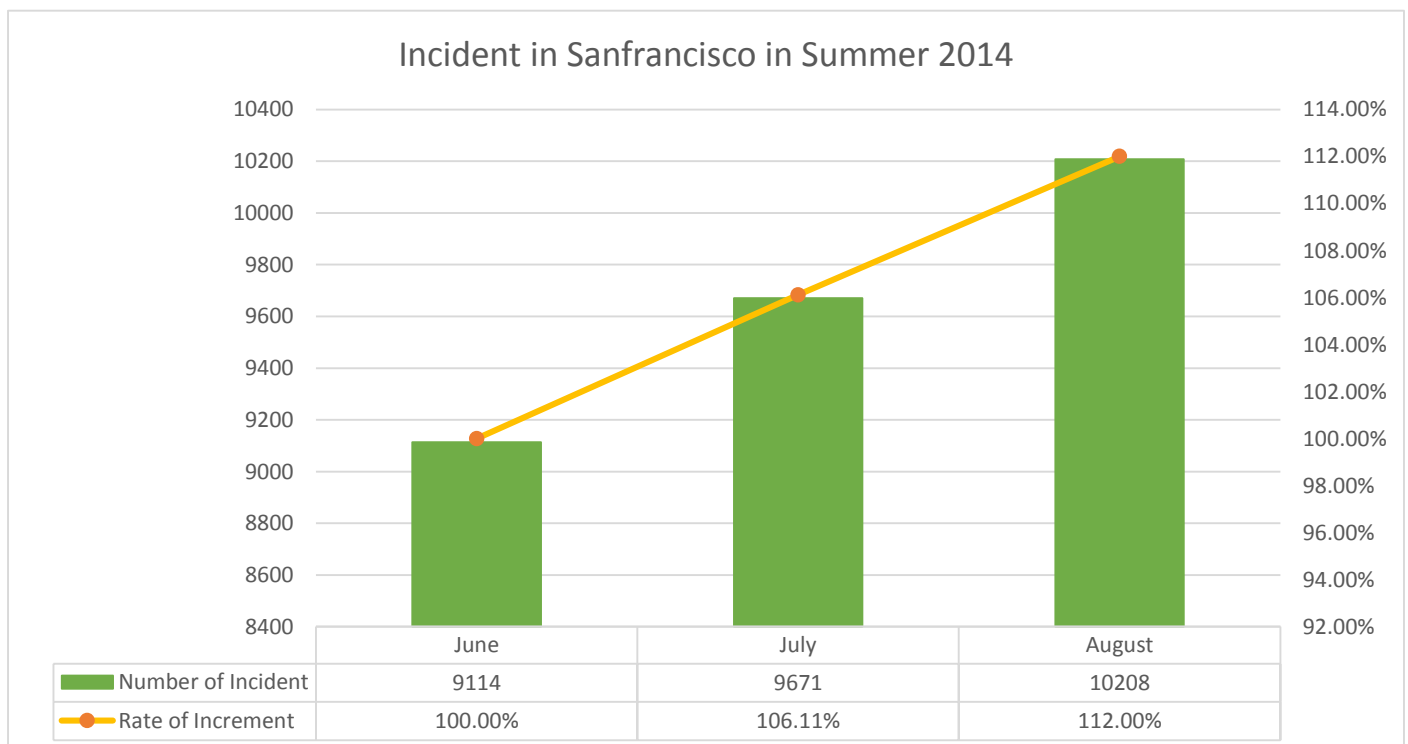Note: The red lines show theft rate reached 50% of all incident.

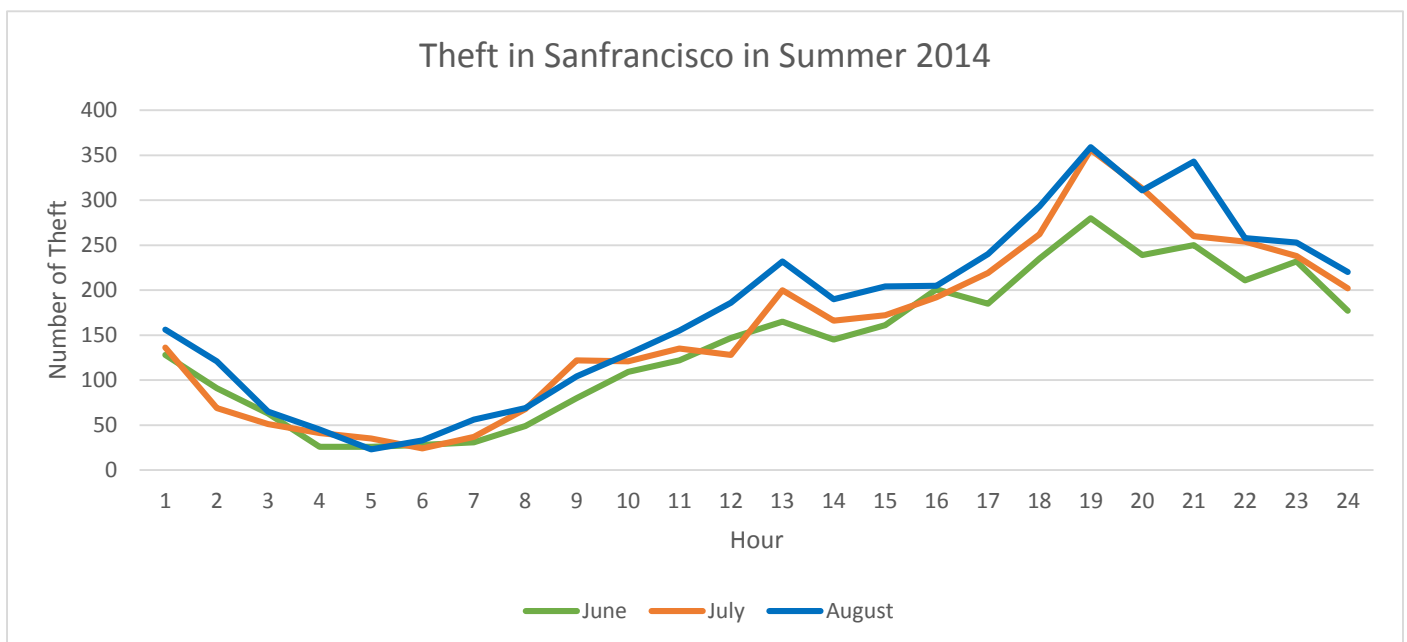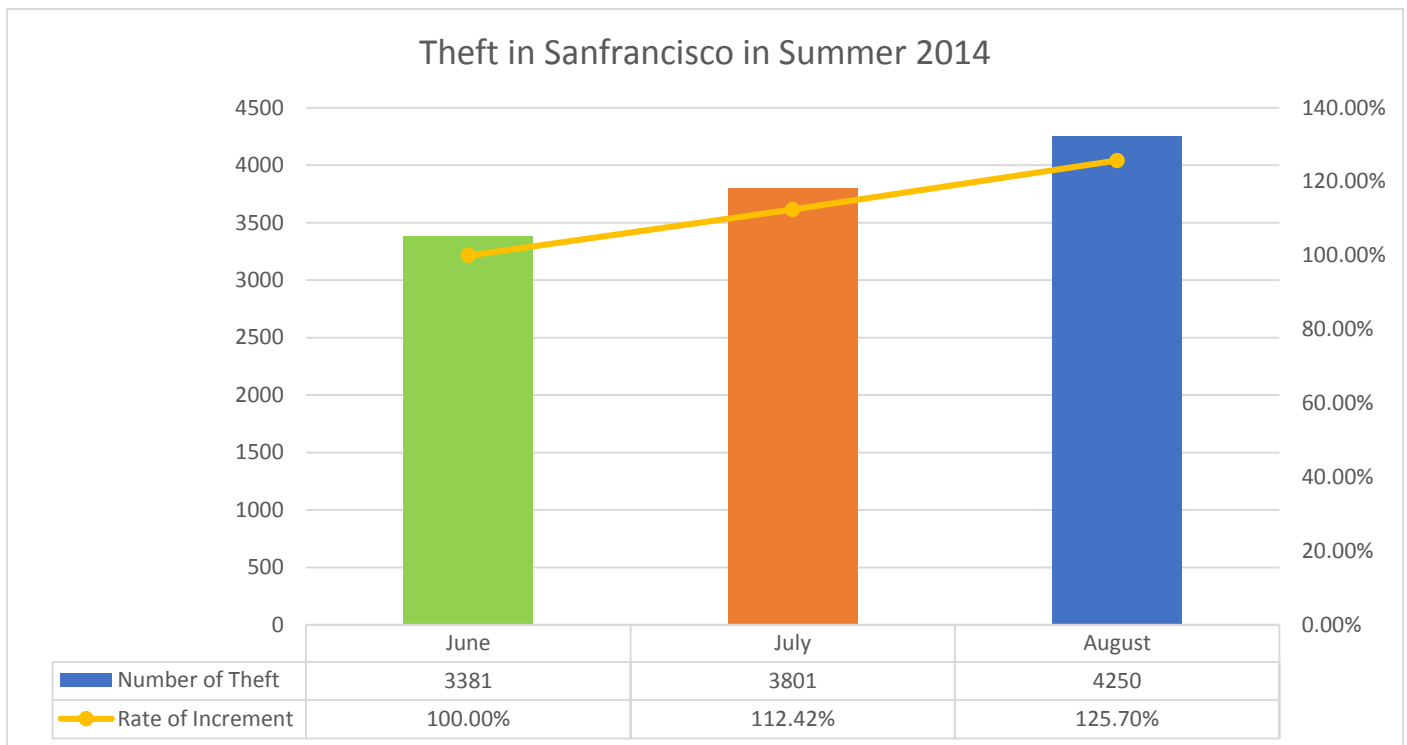## 1.4. The total number of larceny and vehicle theft was over 800 at evening

Larceny and Vehicle Theft in Sanfrancisco in Summer 2014

Legend: LARCENY THEFT, VEHICLE THEFT, LARCENY THEFT RATE, VEHICLE THEFT RATE
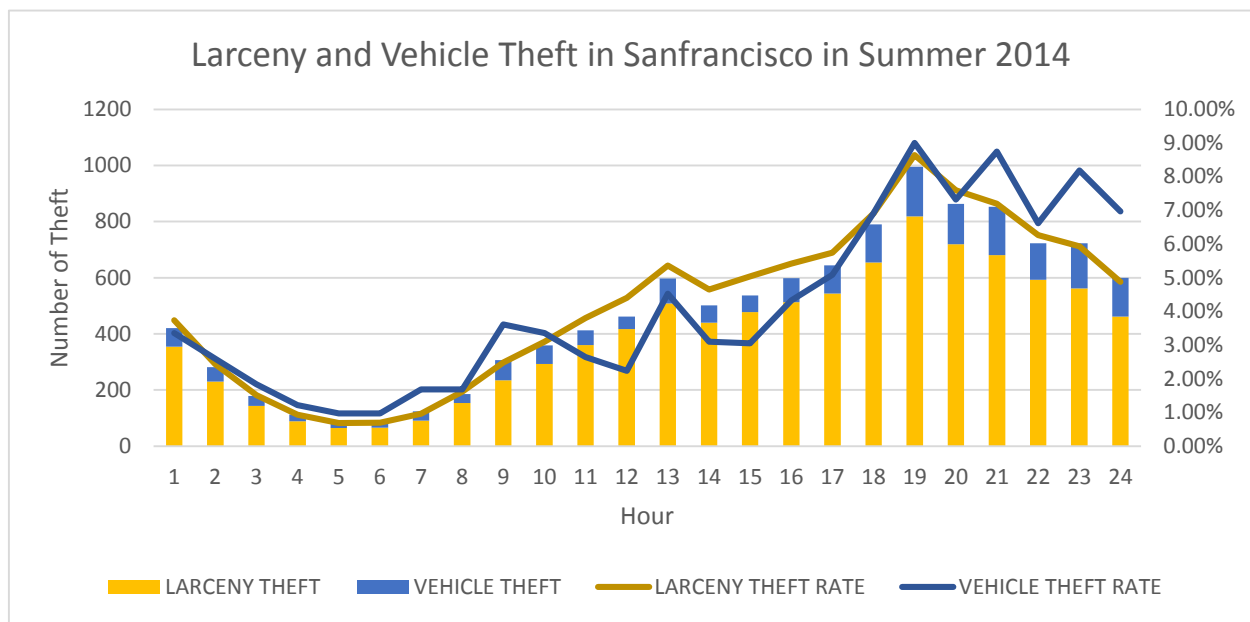
2. Incident increased in the summer 2014

2.1. The total number of Incident increased in the summer 2014

Incident in Sanfrancisco in Summer 2014

	June	July	August
Number of Incident	9114	9671	10208
Rate of Increment	100.00%	106.11%	112.00%

2.2. Theft of Incident increased in the summer 2014

Theft in Sanfrancisco in Summer 2014

	June	July	August
Number of Theft	3381	3801	4250
Rate of Increment	100.00%	112.42%	125.70%

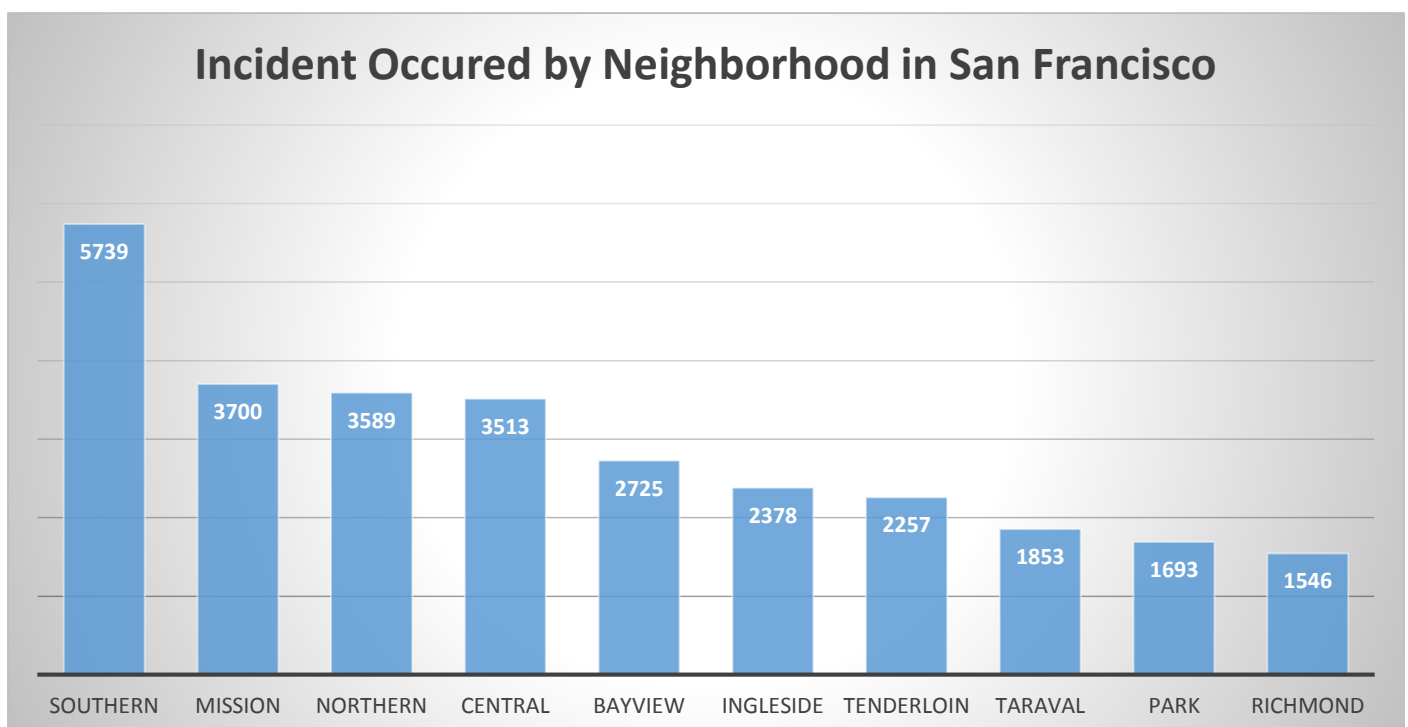### Theft in Sanfrancisco in Summer 2014

2.3. The increment of theft is higher than incident in the summer 2014
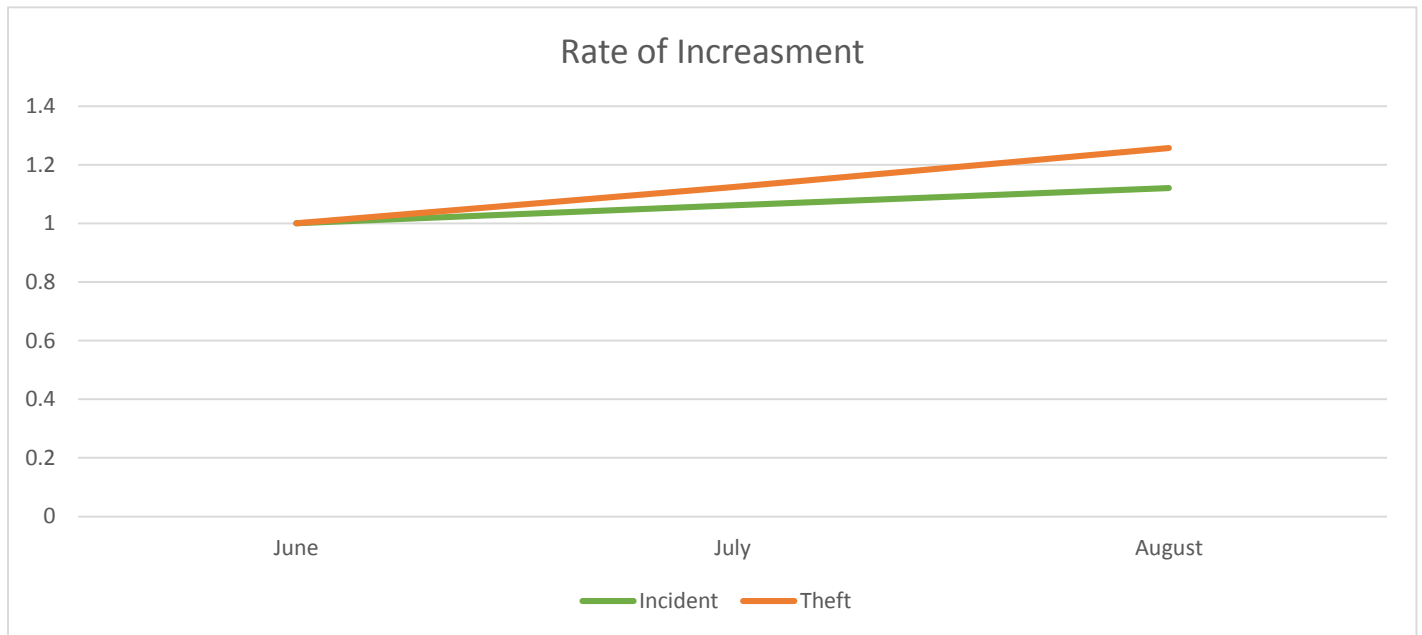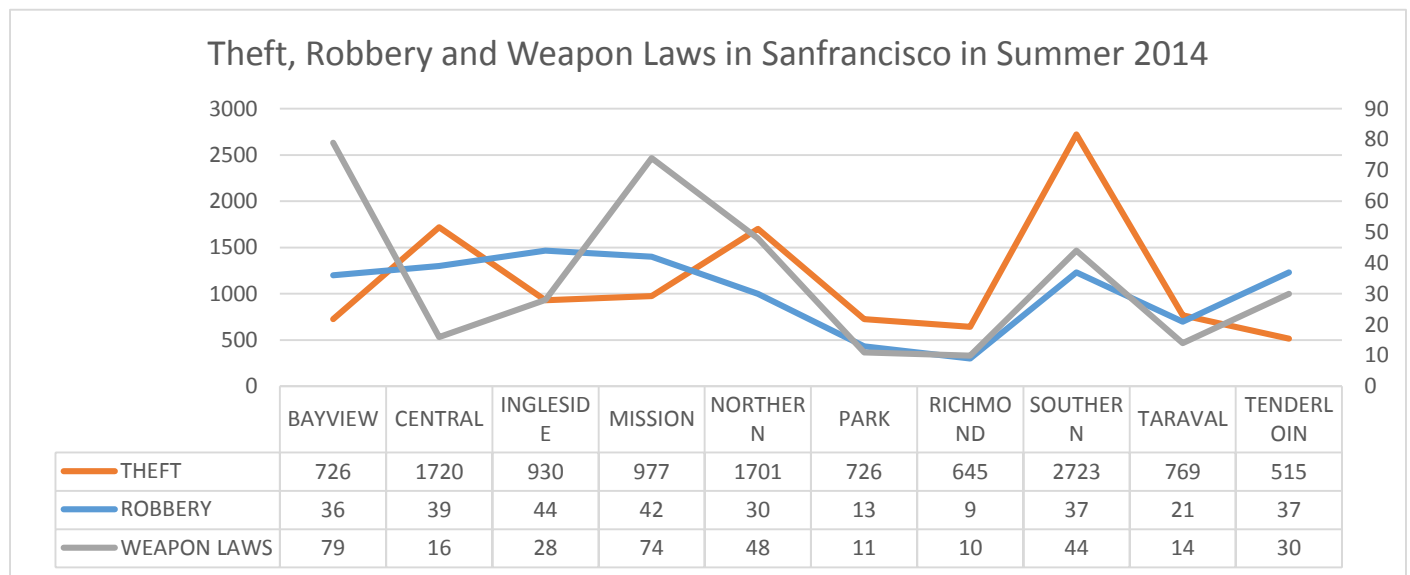

3. Incident occurred in various areas

3.1. The highest incident occurred in Southern and the less areas are Taravel, Park and Richmond.
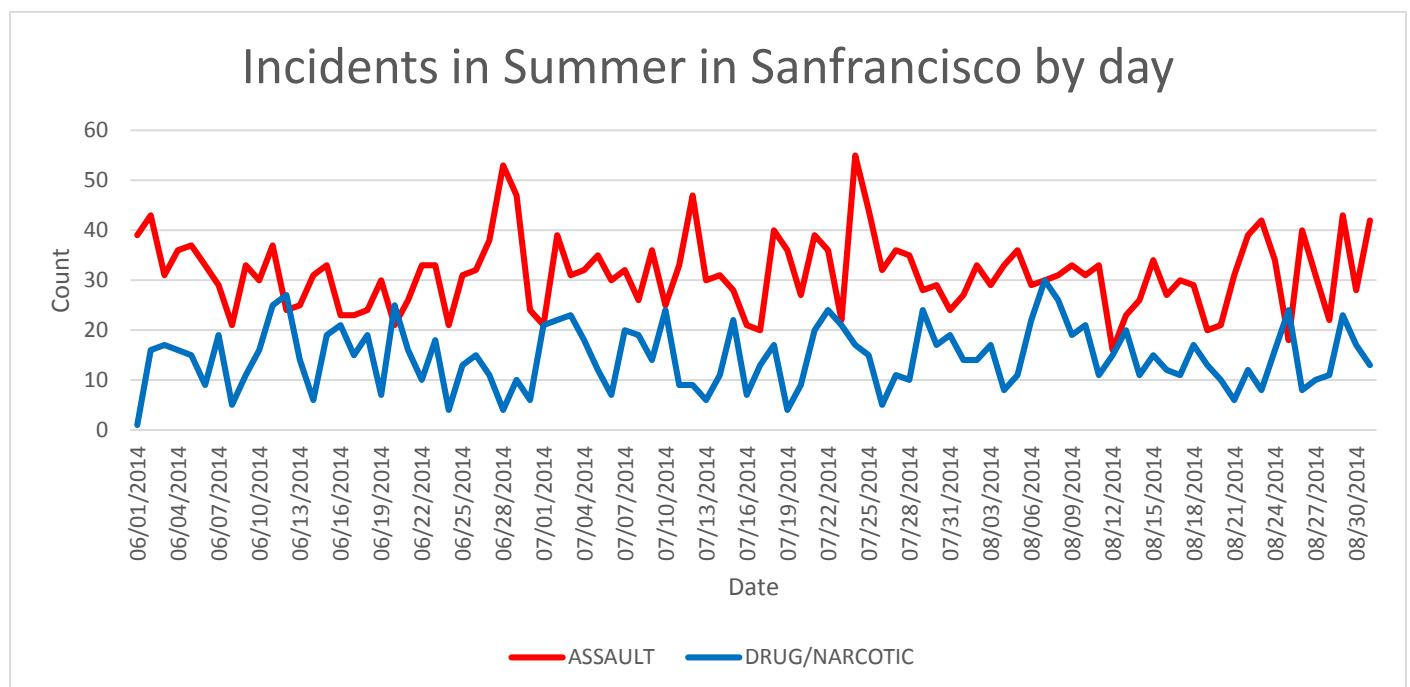
3.2. The highest incident occurred in Southern and the less areas are Taravel, Park and Richmond.

Theft, Robbery and Weapon Laws in Sanfrancisco in Summer 2014

	BAYVIEW	CENTRAL	INGLESIDE	MISSION	NORTHERN	PARK	RICHMOND	SOUTHERN	TARAVAL	TENDERLOIN
THEFT	726	1720	930	977	1701	726	645	2723	769	515
ROBBERY	36	39	44	42	30	13	9	37	21	37
WEAPON LAWS	79	16	28	74	48	11	10	44	14	30

4. Some incident are related

4.1. Assault was opposite to drug by day
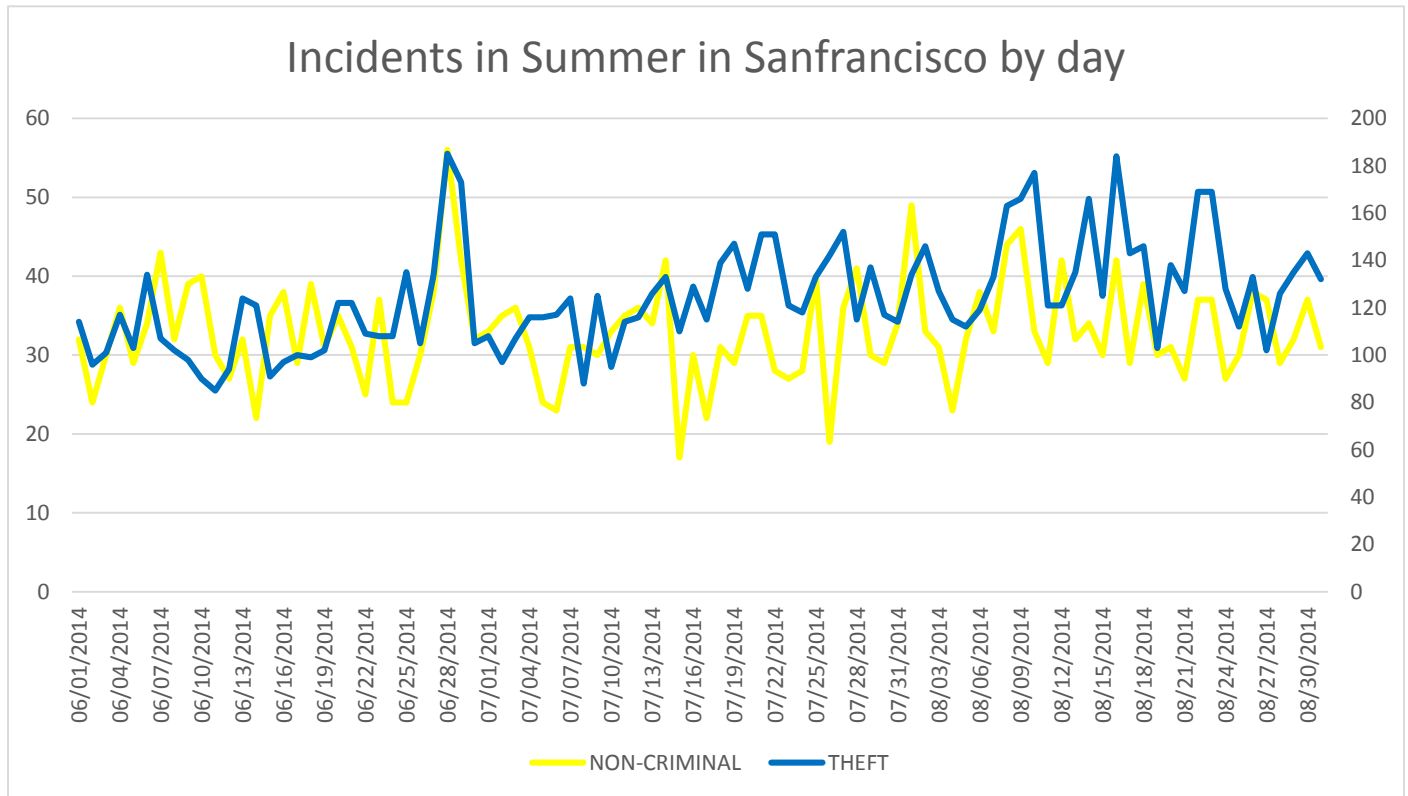
Incidents in Summer in Sanfrancisco by day

4.2. Larceny theft was likely to non-criminal by day
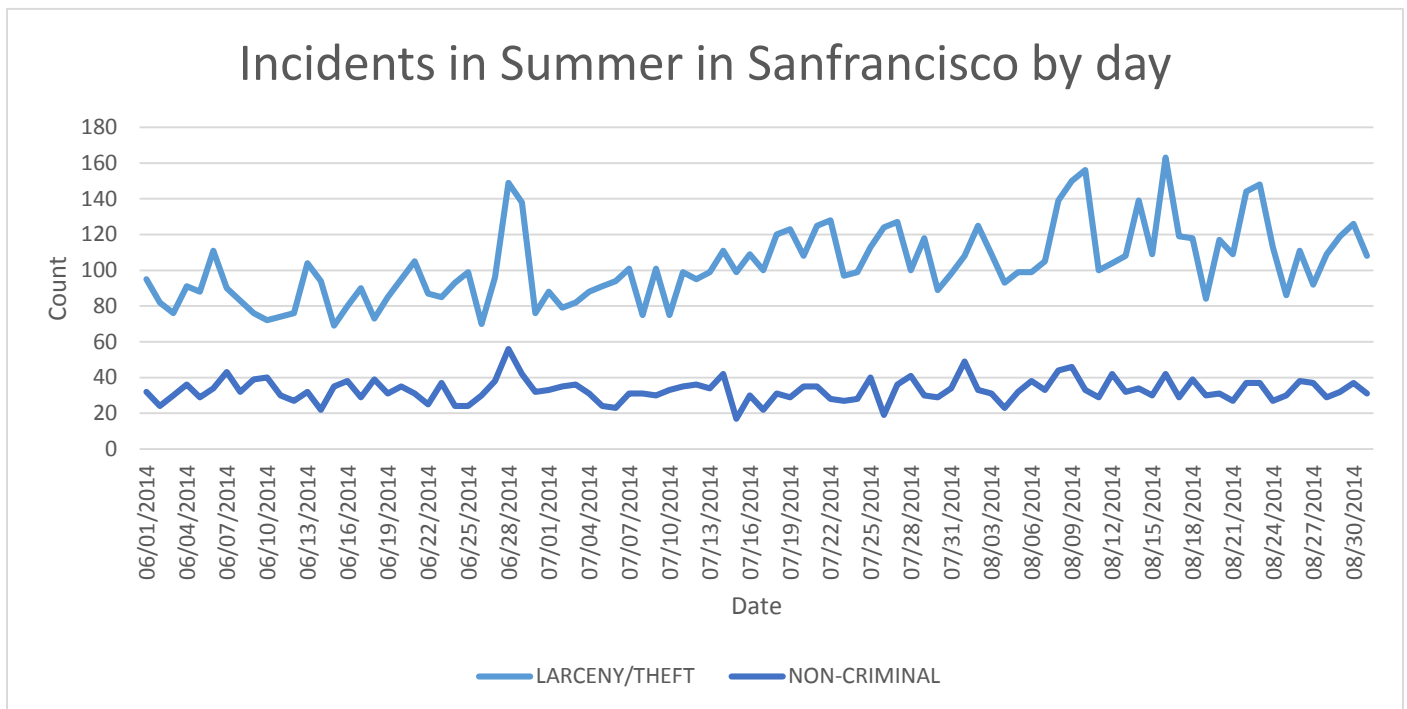
4.3. Vehicle theft was likely to non-criminal by day
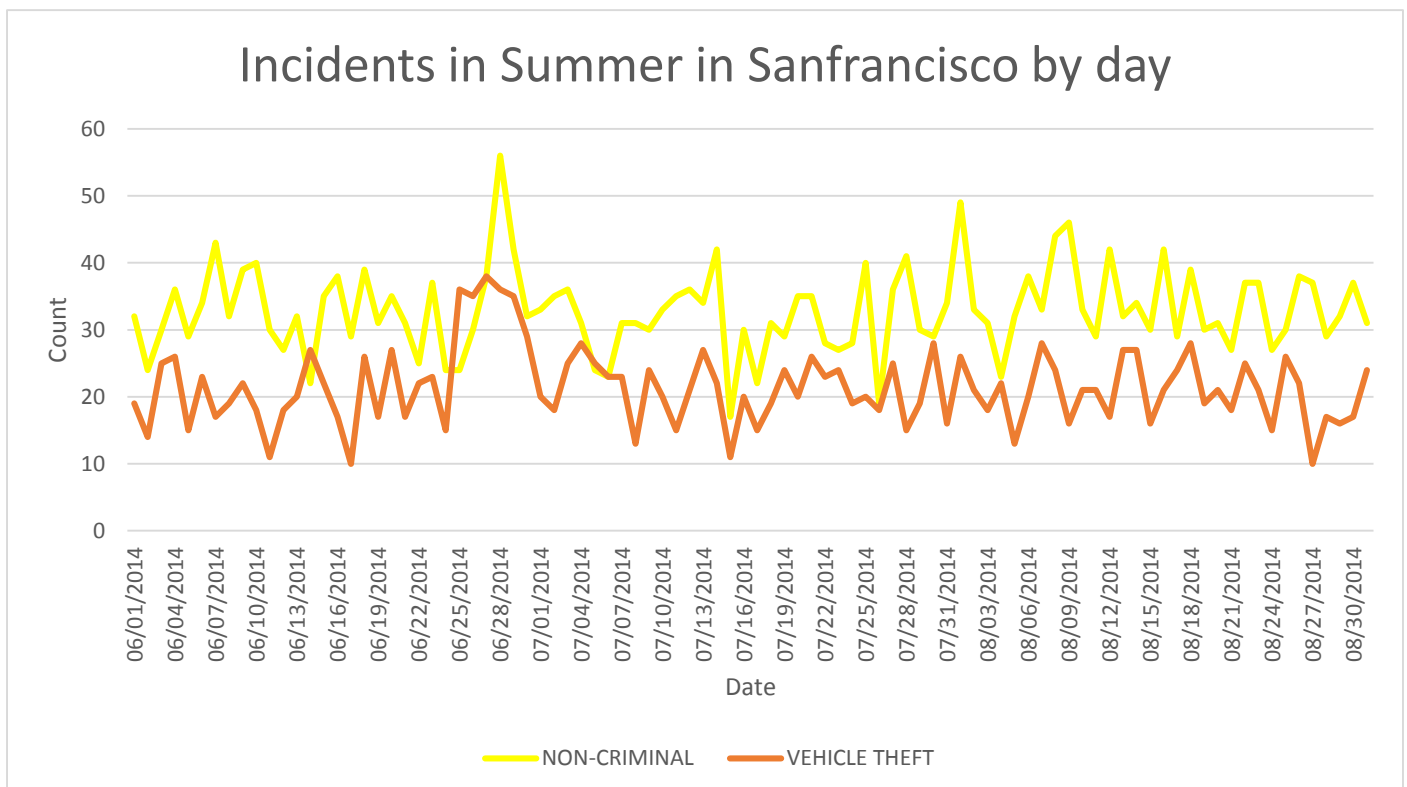
4.4. Theft (including both vehicle and larceny) was likely to non-criminal by day

Summary

In summer in San Francisco, theft took a big part of incident. The lowest incident occurred at 5 AM and the highest at 7 PM. From June to August, the number of incident increased 12%. In the city, The highest incident occurred in Southern and the safeties areas are Taravel, Park and Richmond. About the relation among the category of incident, assault was opposite to drug, and Theft was likely to non-criminal.